

Repeat Performance

Motorika's REO therapy can aid upper extremity hemiparesis.

BY ANAR SHAH, PTA

Our outpatient clinic provides physical therapy and occupational therapy for people with stroke, brain injury, Parkinson's and other neurological conditions. Partial paralysis is a common symptom of these conditions. We've found that Motorika's REOGo is an effective treatment modality for our stroke patients with a hemiparetic upper extremity.

REO therapy is a computerized robotics-based system that offers a practical approach to delivering engaged repetitive neuromuscular retraining of arm function. The repetitive task practice and ability to perform hundreds of repetitions in a short amount of time makes it an excellent tool to produce neuroplastic changes in the brain.

The REO is adaptable and can be used with high and low functioning patients. It's

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gratifying for patients performing at a low level because they can experience some connection with their arm as they watch computer targets and engage their arm to move toward them. Even high functioning patients who initially thought that this exercise would be too easy have reported being challenged.

Several components can be adapted to progress patients. The hand accessories include a flat hand or grasp hand that can be used with forearm support. Patients with more hand function use a joystick handle. Many parameters can be changed to personalize and progress each exercise pattern. Cognitive games incorporating upper extremity movements are also available. As a patient's strength and control improve, he advances through guided, initiated, step-initiated and free motion modes.

Over a 7-month period, patients at our facility went through the REO Stream program. The REO Stream is an intensive program that's performed 2 hours a day, 5 days a week for 15 days. Before starting the program, the

upper extremity Fugl-Meyer scale was used as an objective baseline assessment measure. We repeated the Fugl-Meyer at the end of the program to measure outcomes. All 24 patients who participated in the REO Stream program demonstrated significant improvement on the Fugl-Meyer motor score.

Our facility is the first clinic in the United States to use the REO Stream, and I've had the opportunity to run the program. I was trained for 3 weeks by an occupational therapist who consulted with our clinic. During the time we've used the REOGo, Motorika has always been available to train us and help resolve any questions or problems.

Once a clinician has a working knowledge of the system, it doesn't take long to set up patients. Instead of wasting time with setup, a full session of therapeutic work can take place with maximal functional repetitions performed. Some patients even have friendly competitions to see who can perform the most repetitions in an hour.

Patients who have completed the program have provided positive feedback. Several users were so pleased with their progress that they participated in the program again. In addition to improved test scores, patients notice improved function and increased strength and control of movement. Family members also comment on these notable improvements.

Motorika will be introducing home units of the system next year. This will be an ideal adjunct to therapy and allow patients to continue their progress at home.

I enjoy working with REOGo because of the variety of exercises and the ability to adapt to each person's needs. The setup is fairly easy, and patient progress is remarkable. My experience with REOGo and Motorika has been a positive one, and our patients have clearly taken advantage of the system's benefits. ■

Anar Shah oversees a patient who's using the REOGo for repetitive arm movements in functionally relevant patterns.

Photo courtesy SWAN Rehab

